



# MGBR20L45C

**DIODE**

## DUAL MOS GATED BARRIER RECTIFIERS

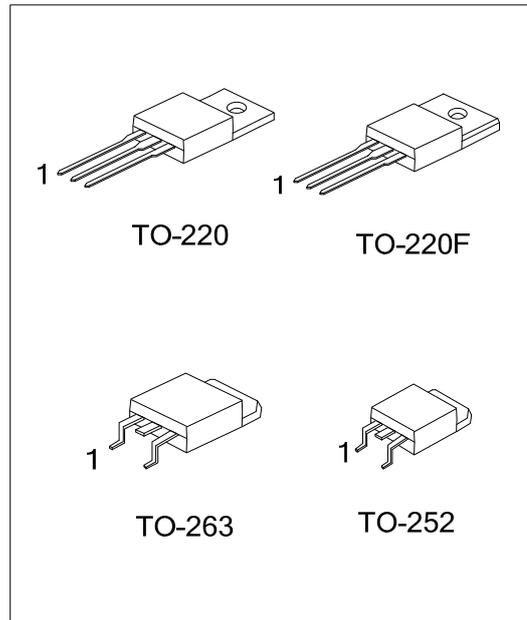
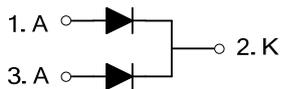
### DESCRIPTION

The UTC **MGBR20L45C** is a dual mos gated barrier rectifiers, it uses UTC's advanced technology to provide customers with high current capability, low forward voltage and high switching speed, etc.

### FEATURES

- \* Low forward voltage
- \* High switching speed
- \* High current capability

### SYMBOL



### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR20L45CL-TA3-T	MGBR20L45CG-TA3-T	TO-220	A	K	A	Tube
MGBR20L45CL-TF3-T	MGBR20L45CG-TF3-T	TO-220F	A	K	A	Tube
MGBR20L45CL-TN3-R	MGBR20L45CG-TN3-R	TO-252	A	K	A	Tape Reel
MGBR20L45CL-TQ2-T	MGBR20L45CG-TQ2-T	TO-263	A	K	A	Tube
MGBR20L45CL-TQ2-R	MGBR20L45CG-TQ2-R	TO-263	A	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Common Cathode

<p>MGBR20L45CL-TA3-T</p> <p>(1)Packing Type</p> <p>(2)Package Type</p> <p>(3)Green Package</p>	<p>(1) T: Tube, R: Tape Reel</p> <p>(2) TA3: TO-220, TF3: TO-220F, TN3: TO-252</p> <p>TQ2: TO-263</p> <p>(3) L: Lead Free, G: Halogen Free and Lead Free</p>
--	--

### MARKING

TO-220 / TO-220F	TO-252 / TO-263
<p>UTC MGBR20L45C □</p> <p>Lot Code ← □ □ □ □ → Data Code</p> <p>1</p> <p>L: Lead Free G: Halogen Free</p>	<p>UTC MGBR20L45C □</p> <p>Lot Code ← □ □ □ □ → Data Code</p> <p>1</p> <p>L: Lead Free G: Halogen Free</p>

# MGBR20L45C

## DIODE

### ■ ABSOLUTE MAXIMUM RATINGS ( $T_A=25^{\circ}\text{C}$ unless otherwise specified)

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitance load, derate current by 20%.

PARAMETER		SYMBOL	RATINGS	UNIT
DC Blocking Voltage		$V_{RM}$	45	V
Working Peak Reverse Voltage		$V_{RWM}$	45	V
Peak Repetitive Reverse Voltage		$V_{RRM}$	45	V
Average Rectified Forward Current (Rated VR-20KHz Square Wave) – 50% duty cycle	Per Leg	$I_O$	10	A
	Total		20	A
Peak Forward Surge Current - 1/2 60Hz		$I_{FSM}$	120	A
Operating Junction Temperature		$T_J$	-65 ~ +150	$^{\circ}\text{C}$
Storage Temperature		$T_{STG}$	-65 ~ +150	$^{\circ}\text{C}$

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

### ■ THERMAL CHARACTERISTICS (PER LEG)

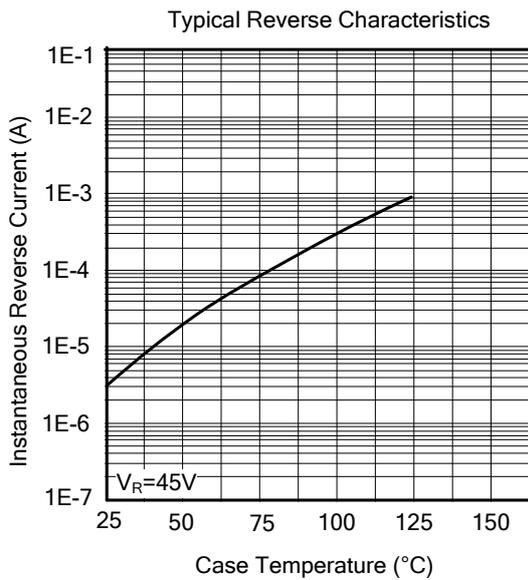
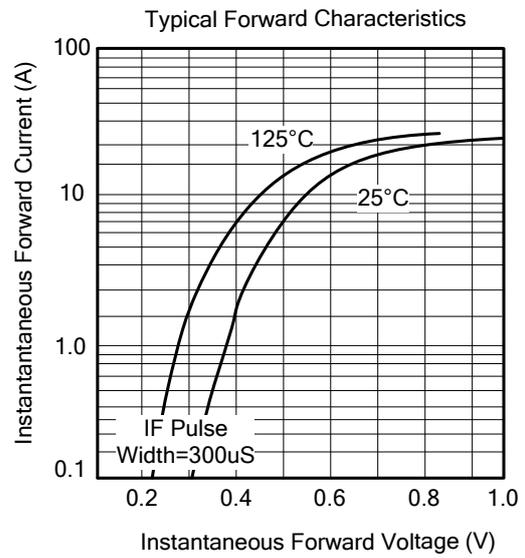
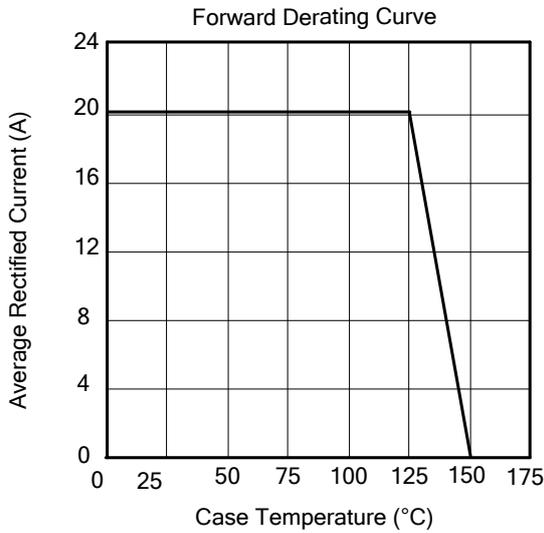
PARAMETER		SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	TO-220	$\theta_{JC}$	2	$^{\circ}\text{C}/\text{W}$
	TO-220F		4	$^{\circ}\text{C}/\text{W}$
	TO-252		6	$^{\circ}\text{C}/\text{W}$
	TO-263		3	$^{\circ}\text{C}/\text{W}$

### ■ ELECTRICAL CHARACTERISTICS (PER LEG) ( $T_A=25^{\circ}\text{C}$ unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=0.50\text{mA}$	45			V
Instantaneous Forward Voltage	$V_{FM}$	$I_F=10\text{A}, T_J=25^{\circ}\text{C}$			0.58	V
		$I_F=10\text{A}, T_J=125^{\circ}\text{C}$			0.53	V
Leakage Current	$I_{RM}$	$V_R=45\text{V}, T_J=25^{\circ}\text{C}$			300	$\mu\text{A}$
		$V_R=45\text{V}, T_J=125^{\circ}\text{C}$			80	mA

Note: Pulse Test: Pulse width  $\leq 300\mu\text{s}$ , Duty cycle  $\leq 2\%$ .

■ TYPICAL CHARACTERISTICS



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.